



Emerging virus diseases transmitted by whiteflies

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Abstract:

Virus diseases that have emerged in the past two decades limit the production of important vegetable crops in tropical, subtropical, and temperate regions worldwide, and many of the causal viruses are transmitted by whiteflies (order Hemiptera, family Aleyrodidae). Most of these whitefly-transmitted viruses are begomoviruses (family Geminiviridae), although whiteflies are also vectors of criniviruses, ipomoviruses, torradoviruses, and some carlaviruses. Factors driving the emergence and establishment of whitefly-transmitted diseases include genetic changes in the virus through mutation and recombination, changes in the vector populations coupled with polyphagy of the main vector, *Bemisia tabaci*, and long distance traffic of plant material or vector insects due to trade of vegetables and ornamental plants. The role of humans in increasing the emergence of virus diseases is obvious, and the effect that climate change may have in the future is unclear.

Source: <http://dx.doi.org/10.1146/annurev-phyto-072910-095235>

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Food/Water Security

Food/Water Security: Agricultural Productivity

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact:

specification of health effect or disease related to climate change exposure

Health Outcome Unspecified

Climate Change and Human Health Literature Portal

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Resource Type:

format or standard characteristic of resource

Review

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content